

MONTHLY WEATHER REVIEW.

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INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States during March, 1884, based upon the reports from the regular and voluntary observers of the Signal Service, and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic ocean during the month are also given, and their approximate paths shown on chart ii.

The following may be mentioned as the most noteworthy features of the month:

1. The continuation of the flood which began in the lower Mississippi river during February. At New Orleans, Louisiana, the river reached a height exceeding by one inch the high stages of 1874 and 1883. Damaging freshets also occurred in the smaller rivers in many states, those occurring in California being especially destructive.

2. The destructive tornadoes and hail storms which occurred in the Southern states on the 25th, during the passage of low area xi.

The month was slightly warmer than the average in the states bordering on the Atlantic south of New England, in the Ohio valley, Tennessee, and the Gulf states. In other sections of the country the mean temperatures were below the normal.

The precipitation of the month was largely in excess of the average in California, Tennessee, and the east Gulf states, while marked deficiencies occurred in the north Pacific coast region, Florida peninsula, and the Rio Grande valley.

In the preparation of this REVIEW the following data, received up to April 20th, 1884, have been used, viz.: the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and twenty-two Signal Service stations and fourteen Canadian stations, as telegraphed to this office; one hundred and sixty-one monthly journals, and one hundred and forty-seven monthly means from the former, and fourteen monthly means from the latter; two hundred and seventy-two monthly registers from voluntary observers; forty-eight monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports, through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the local weather services of Alabama, Illinois, Indiana, Iowa, Kansas, Nebraska, Ohio, and Tennessee, and of the Central Pacific railway company; trustworthy newspaper extracts; and special reports.

ATMOSPHERIC PRESSURE.

[Expressed in inches and hundredths.]

The distribution of mean atmospheric pressure for March,

1884, determined from the tri-daily telegraphic observations of the Signal Service, is shown by the isobarometric lines on chart iii. This chart shows the mean pressure for the month to have been greatest over northeastern Montana, the upper Missouri valley, and in South Carolina, Georgia and Florida, where barometric means of 30.1 occurred. The regions of least mean pressure comprised the north Pacific coast region and Canadian maritime provinces, where the mean pressure was below 29.95, the lowest mean, 29.91, being reported from Fort Canby, Washington Territory and Sidney, Nova Scotia.

The mean pressure for March, compared with that for the preceding month, shows that a decrease has occurred in all parts of the country, except over a small area in the lake region, where there was no change. The greatest decrease occurred in the upper Missouri valley, Idaho and the Canadian maritime provinces, where it varied from .15 to .17. A decrease ranging from .10 to .15 occurred over the eastern slope of the Rocky mountains, on the north Pacific coast and in New England. In the remaining districts, the deficiencies varied from .01 to .10.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

The mean pressure for March, compared with the normal for the corresponding month, shows deficiencies in the eastern Gulf states and in all districts west of the Mississippi river. The most marked departures occurred over an area extending from Colorado and Utah northwestward to the Pacific coast, where they varied from .11 to .17. In the lake region, Ohio valley, and in the districts on the Atlantic coast, the mean pressure was above the normal, the departures varying from .01 to .11, being greatest in New England.

BAROMETRIC RANGES.

The barometric ranges over the entire country varied from .34 at Key West, Florida, to 1.42 at Marquette, Michigan. The monthly ranges exceeded 1.25 over an area extending from southern Dakota and eastern Nebraska northeastward to Lake Superior. They were less than .50 in southern Florida, and in the southern parts of Arizona, California, and New Mexico.

In the several districts the monthly barometric ranges have varied as follows:

New England.—From .91 at New Haven, Connecticut, to 1.02 at Provincetown, Massachusetts, and 1.07 on the summit of Mount Washington, New Hampshire.

Middle Atlantic states.—From .86 at Lynchburg, Virginia, to .99 at Delaware Breakwater, Delaware.

South Atlantic states.—From .80 at Jacksonville, Florida, to .88 at Fort Macon, North Carolina.

Florida peninsula.—From .34 at Key West, to .50 at Sanford.

Eastern Gulf states.—From .56 at New Orleans, Louisiana, to .68 at Montgomery, Alabama.

Western Gulf states.—From .61 at Galveston, Texas, to .90 at Fort Smith, Arkansas.

Rio Grande valley.—From .61 at Brownsville, Texas, to .67 at Rio Grande City, Texas.

Ohio valley and Tennessee.—From .80 at Chattanooga, Knoxville, and Memphis, Tennessee, to .98 at Indianapolis, Indiana, and Louisville, Kentucky.

Lower lake region.—From .90 at Oswego, New York, to 1.08 at Detroit, Michigan.